UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,174	11/12/1999	IAN M. BENNETT	PHO-99-003	1347

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EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 to 26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 to 9 and 11 to 26* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 August 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *2/14/05 & 5/20/05*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 to 9, 13, 15, 18, 20, 23, 25, and 26 are rejected under 35 U.S.C. 103(a)

as being unpatentable over *White et al.* in view of *Perrone*.

Concerning independent claims 1, 13, 18, 25, and 26, *White et al.* discloses a

system and method for a distributed voice user interface, comprising:

"a receiving routine executed on the server computing system for receiving

speech data associated with a user speech-based query, said speech data being

characterized by a data content that is substantially inadequate by itself for permitting

recognition of words articulated in said speech query" – a local device 14 receives

speech input from a user at microphone 20, and processing component 28 performs

preliminary processing of the speech input; parameter extraction component transforms

speech input into a series of feature parameters; if local processing is not sufficient to

address commands, instructions, directions, or requests from a user, local device 14

establishes a connection to remote device 12, via telecommunications network 16 or

local area network 18, and transmits data and/or speech to remote system 12 for

processing (column 17, line 38 to column 18, line 8: Figures 1 to 5); thus, local device

14 transmits speech features to remote device 12 ("the server computing system"),

where speech features are "data that is substantially inadequate by itself for permitting

recognition of words"; a request is "a user speech-based query";

"a speech recognition routine executing on the server computing system for

completing recognition of said speech query using said speech data and said data

content to generate a recognized speech query" – remote system 12 ("the server

computing system") receives input from local device 14 that can be in the form of data

or speech, and speech recognition engine 70 of remote system 12 compares input

speech against acoustic models to obtain a command, instruction, direction, or request

(column 18, line 60 to column 19, line 22: Figures 1 to 5).

Concerning independent claims 1, 13, 18, 25, and 26, *White et al.* discloses a

distributed voice user interface with a client/server architecture, but omits: "a web page

having a list of items, at least some of said list of items being selectable by a user based

on said recognized speech query", "a web page having a search engine for locating

user selected information of interest, said search engine using a text query that is

derived from said recognized speech query", or "a web page routine for presenting one

or more web pages to the user web browser program, wherein data content for said one

or more web pages perceived by the user is controlled by said recognized speech

query." However, it is well known that VXML is a standard for interacting with web

pages by speech recognition. Specifically, *Perrone* teaches voice control of a server,

for retrieving web pages with hyperlinks that present lists of items for selection (column

9, line 41 to column 11, line 32), and for receiving natural language search queries to look up stock symbols and stock quotes (column 11, line 32 to column 12, line 19: Figure 3C). The objective is to provide a local client that rapidly retrieves information from a remote server using voice commands, and to carry out a voice dialogue to locate select, activate, or initiate a computing process or service. It would have been obvious to one having ordinary skill in the art to apply a distributed voice user interface of *White et al.* to a voice control server for selecting from a list of items on a web page or receiving natural language search queries as taught by *Perrone* for the purpose of rapidly retrieving web pages and carrying out voice dialogues.

Regarding claim 2, *Perrone* teaches voice control of a server, for retrieving web pages with hyperlinks that present lists of items for selection (column 9, line 41 to column 11, line 32); each web page displays a list of selectable hyperlinks.

Regarding claim 3, *Perrone* teaches voice control of a server for receiving natural language search queries to look up stock symbols and stock quotes (column 11, line 32 to column 12, line 19: Figure 3C); a natural language speech query permits a user to navigate through the web site.

Regarding claim 4, *Perrone* teaches voice control of a server for receiving natural language search queries to look up stock symbols and stock quotes (column 11, line 32 to column 12, line 19: Figure 3C); stocks are "products and services offered by said website."

Regarding claim 5, *Perrone* teaches HTML web pages and Java applets (column 6, lines 12 to 35).

Regarding claim 6, *Perrone* teaches returning HTML web pages in response to natural language queries, where HTML web pages contain text (Figures 3B and 3C).

Regarding claim 7, *Perrone* teaches voice control of a server for receiving natural language search queries to look up stock symbols and stock quotes (column 10, lines 28 to 45); natural language search queries represent "continuous speech queries"; interaction is in real time, implicitly.

Regarding claim 8, *White et al.* discloses a resident VUI 36 recognizes speech at an elementary level, but if processing speech input locally is not sufficient, then data is transmitted for processing at a remote device 14 (column 17, line 50 to column 18, line 8); there is less latency in distributed processing for speech recognition because a local processor ("a client platform") has fewer computing resources and would be slower to perform operations than on a server having more computing power.

Regarding claim 9, *White et al.* discloses transmitting data and/or speech input to remote server 12 for processing (column 18, lines 7 to 8); remote system 12 receives data or speech (column 18, lines 64 to 65); speech is at least one form of "a minimum amount of information that can be used by said speech recognition engine to complete accurate recognition of words and sentences".

Regarding claim 15, *Perrone* teaches a web page containing a help menu 228 (column 10, lines 55 to 57: Table 1: Figure 3B), which is "a list of one or more items associated with assisting a user to diagnose a product or service problem".

Regarding claim 20, *Perrone* teaches recognition of natural language phrases (column 10, lines 28 to 45).

Regarding claim 23, *Perrone* teaches associating each natural language phrase with a context (column 10, lines 28 to 45); a context is an "environmental variable" associated with a current web page for reducing the number of natural language phrases that need to be searched for a particular voice command.

3.   Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *White et al.* in view of *Perrone* as applied to claims 1 and 13 above, and further in view of *Horvitz et al.*

Perrone omits an interactive character agent for a web site. However, *Horvitz et al.* teaches automated service processes, where an animated agent 306 interacts with a user through speech recognition. (Column 6, Line 50 to Column 7, Line 8: Figure 3) The objective is to provide a more sophisticated interaction for directing automated processes. (Column 2, Lines 10 to 29) It would have been obvious to one having ordinary skill in the art to provide an automated agent for the web site services of *Perrone* as taught by *Horvitz et al.* for the purpose of providing a more sophisticated interaction for automated services at a web site.

4.   Claims 12, 17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *White et al.* in view of *Perrone* as applied to claims 1, 13, and 18 above, and further in view of *Giangarra et al.*

Halverson et al. does not expressly disclose applications to a list of topics associated with an interactive lesson tutorial. However, *Giangarra et al.* teaches a voice

command interface to allow a user to speak a name of a link identified by HTML format

to receive a desired web page. (Abstract) Figures 4 to 12 disclose applications

providing history and background information for the IBM patent server web site and the

US Patent and Trademark Office web site, which are "interactive lesson tutorials" on

information contained in the sites. (Column 6, Line 66 to Column 8, Line 52: Figures 4

to 12) *Giangarra et al.* suggests that allowing the user to speak a name of a link

identified by HTML to receive a desired web page has the advantage of providing an

intuitive and easily usable interface for accessing information from a network of

computers such as the World Wide Web. (Column 2, Lines 6 to 15) It would have been

obvious to one having ordinary skill in the art to provide applications to interactive

lesson tutorials as taught by *Giangarra et al.* in the system and method for voice control

of a server of *Perrone* for the purpose of providing an intuitive and easily usable

interface for accessing information.

5.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over *White et
al.* in view of *Perrone* as applied to claim 13 above, and further in view of *Kuhn et al.
('366)*.

        Perrone does not expressly state that there are multiple search engines and

more than one server, but it is common to interact with a plurality of web pages on a

plurality of servers. Specifically, *Kuhn et al. ('366)* discloses a system and method for

accessing information over the Internet by speech recognition, where there are multiple

search engines simultaneously launched. (Abstract) The objective is to retrieve

information more quickly from a plurality of Internet sites in a robust manner. (Column

3, Line 66 to Column 4, Line 9) It would have been obvious to one having ordinary skill

in the art to provide multiple search engines on more than one server as taught by *Kuhn*

et al. ('366) in the system and method for voice control of a server of *Perrone* for the

purpose of more quickly retrieving information from a plurality of Internet sites in a

robust manner.

6.   Claims 19, 21, and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over *White et al.* in view of *Perrone* as applied to claim 18 above, and

further in view of *Horiguchi et al.*

Concerning claim 19, *Perrone* does not expressly disclose a technique of

recognizing a speech query from a number of predefined sentences to determine a

matching recognized sentence. However, a variety of techniques for parsing and

recognizing speech are known that include recognizing example sentences.

Specifically, *Horiguchi et al.* teaches an analogous art system and method for natural

language parsing and translating, where example database 220 includes various

linguist constructs such as full sentences ("How do you do?" and "May I help you?") and

noun phrases ("strong coffee"). (Column 8, Line 57 to Column 9, Line 11: Figure 3)

Horiguchi et al. suggests the method and system incorporates the ease and accuracy of

the example-based method with the ability to manipulate transfer rules to allow for a

variety of attempts at translation. (Column 2, Lines 32 to 36) It would have been

obvious to one having ordinary skill in the art to utilize example databases containing

complete sentences and noun phrases as taught by *Horiguchi et al.* in the system and method for voice control of a server of *Perrone* for the purpose of providing for ease and accuracy to allow for a variety of attempts at natural language processing.

Concerning claim 21, *Horiguchi et al.* teaches example database 220 includes noun phrases ("strong coffee"). (Column 8, Line 57 to Column 9, Line 11: Figure 3)

Concerning claim 22, *Perrone* teaches associating each natural language phrase with a context (column 10, lines 28 to 45); a context is an "environmental variable" associated with a current web page for reducing the number of natural language phrases that need to be searched for a particular voice command.

Response to Arguments

7. Applicant's arguments filed 10 November 2004 have been considered but are moot in view of the new grounds of rejection.

Allowable Subject Matter

8. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (571) 272-
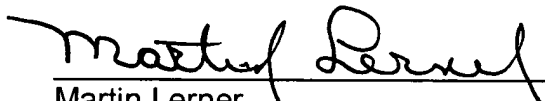
7608. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
6/16/05

Martin Lerner
Examiner
Group Art Unit 2654